

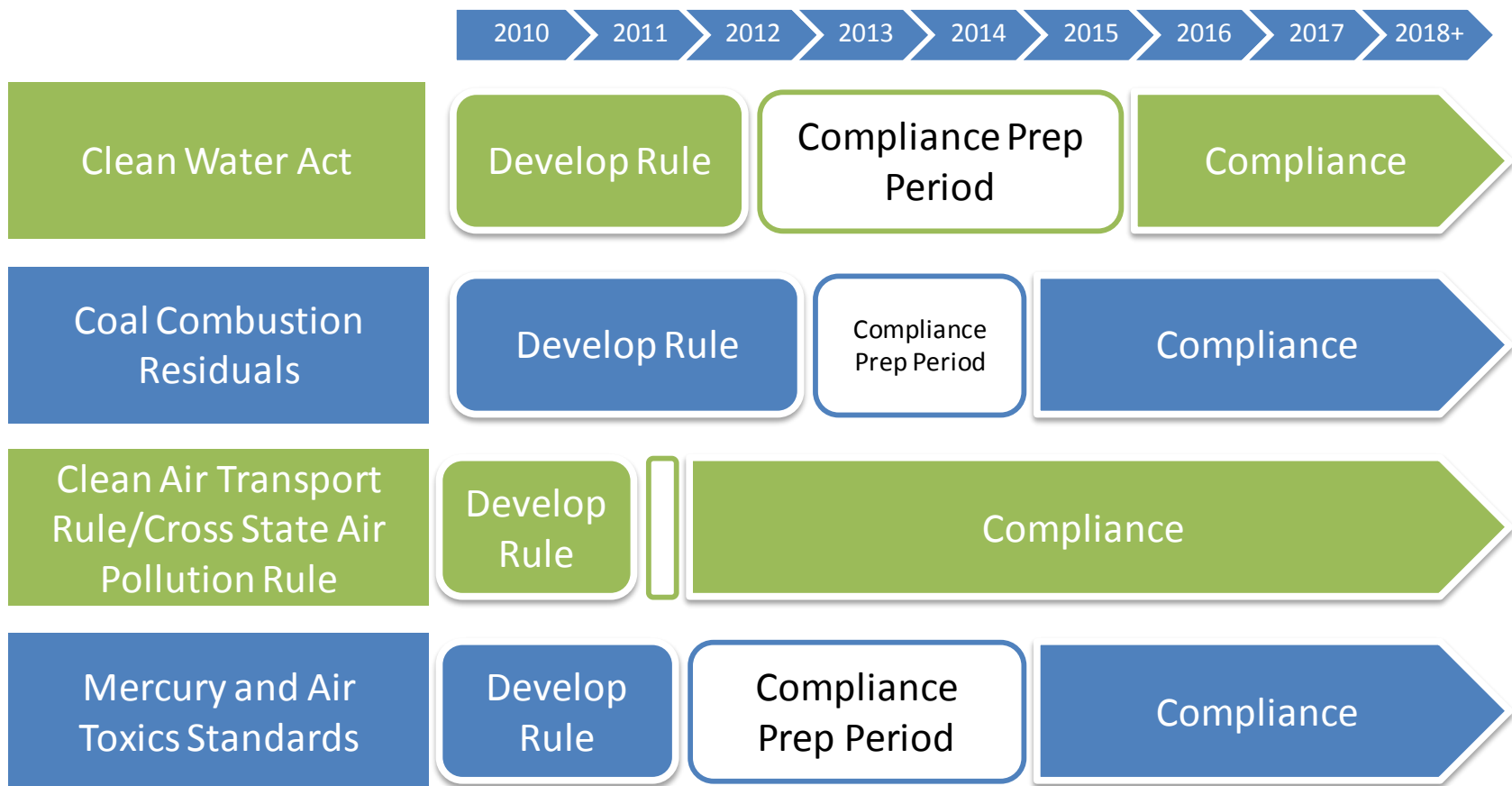
# EPA Impact Analysis Report to the Illinois Commerce Commission

John Bear  
CEO - MISO  
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# Discussion Overview

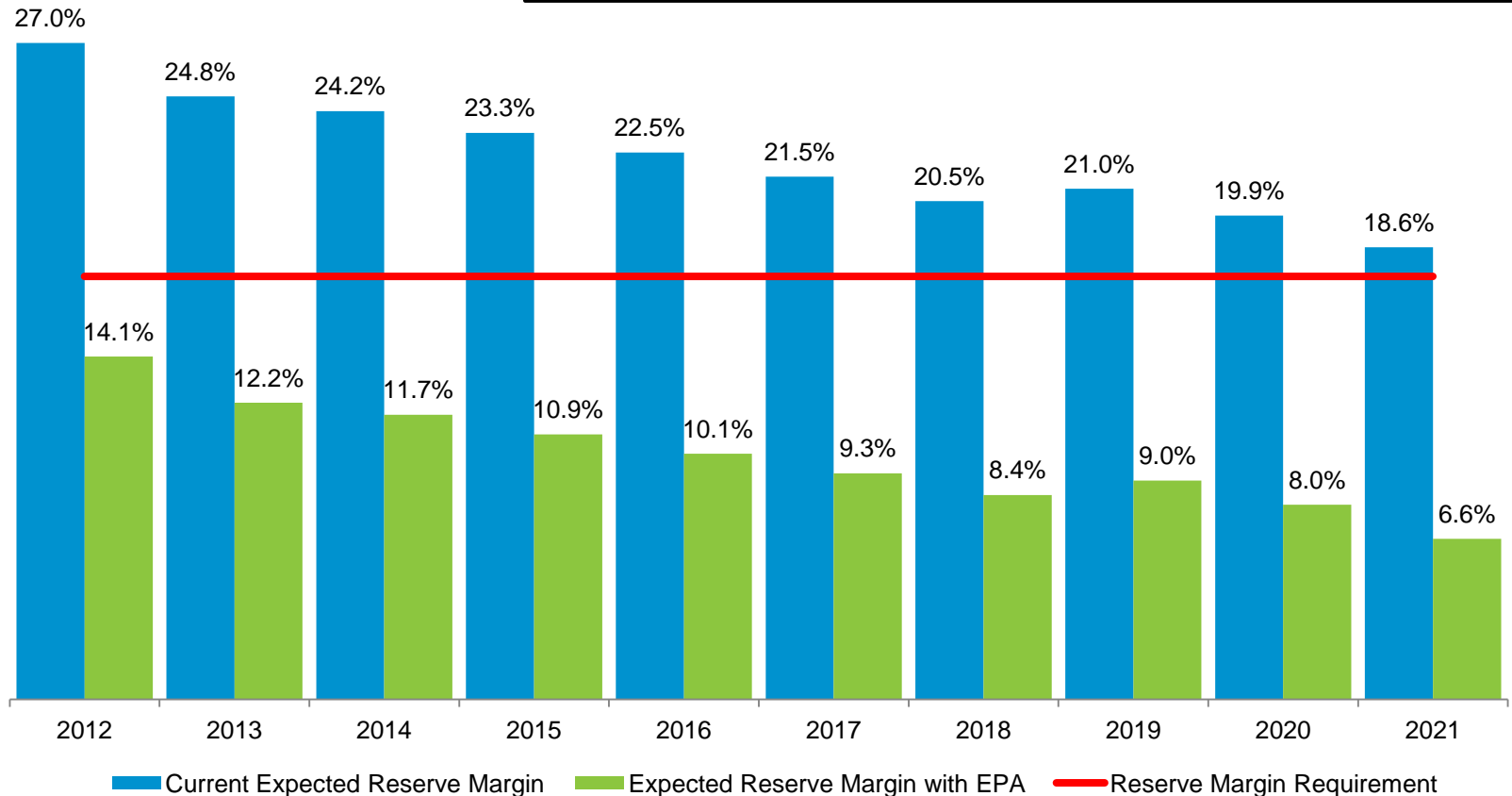
- Environmental regulations pose a serious threat to the deliverability of reliable, low-cost energy
  - Plant closings will reduce the reserve margins below reliable levels
  - Significant investment (\$33 Billion) is required to retrofit or replace resources
  - Fuel mix change will increase price volatility
- Significant coordination is required to comply with standards
  - Simultaneous outage of 61 GW of resources
- To mitigate these impacts two key actions are required
  - Construct sufficient transmission to allow delivery of available resources
  - Eliminate administrative / seams barriers to delivery of available resources

# Environmental Protection Agency Proposing Four New Regulations



# Expected retirements would immediately put MISO region below resource margin requirements

- Simultaneous outages required to retrofit or replace 61 GW
- \$5 per MW energy cost increase; \$33 B capital cost



# To reduce the reliability impact of the EPA rules, MISO is working on transmission planning and resource deliverability

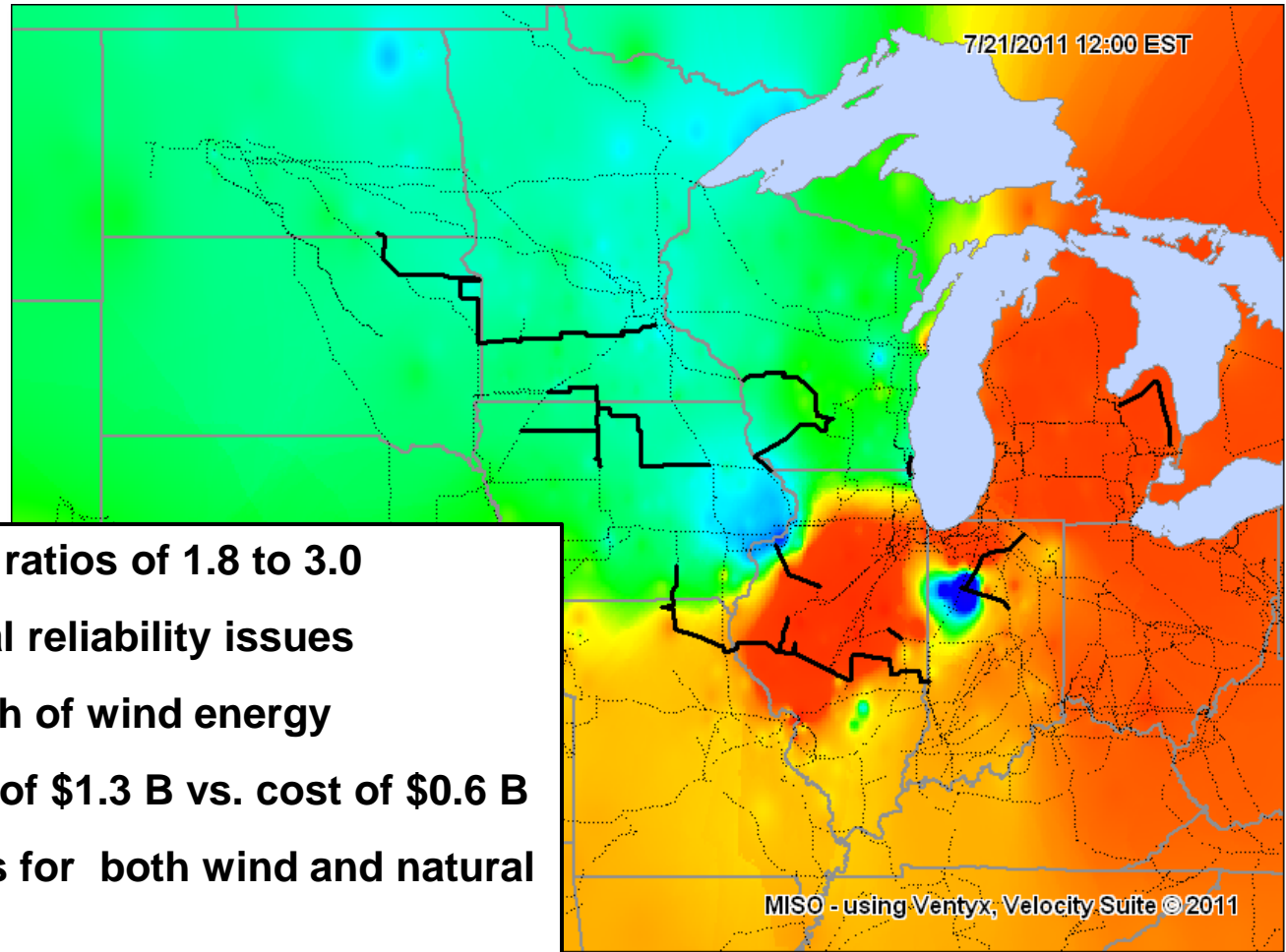
## Transmission Planning

- Eliminate reliability problems driven by location of generation retirements
- Enable efficient flow of energy and reserves throughout the region – reducing costs
- Enable efficient transfer of capacity throughout the region – reducing reserve margin requirement

## Resource Deliverability

- Eliminate artificial (Policy) barriers to resource transactions between markets
- The only barrier to transactions should be actual physical transfer constraints
- Goal is to improve the transparency and efficiency of cross-border resource deliverability between regions

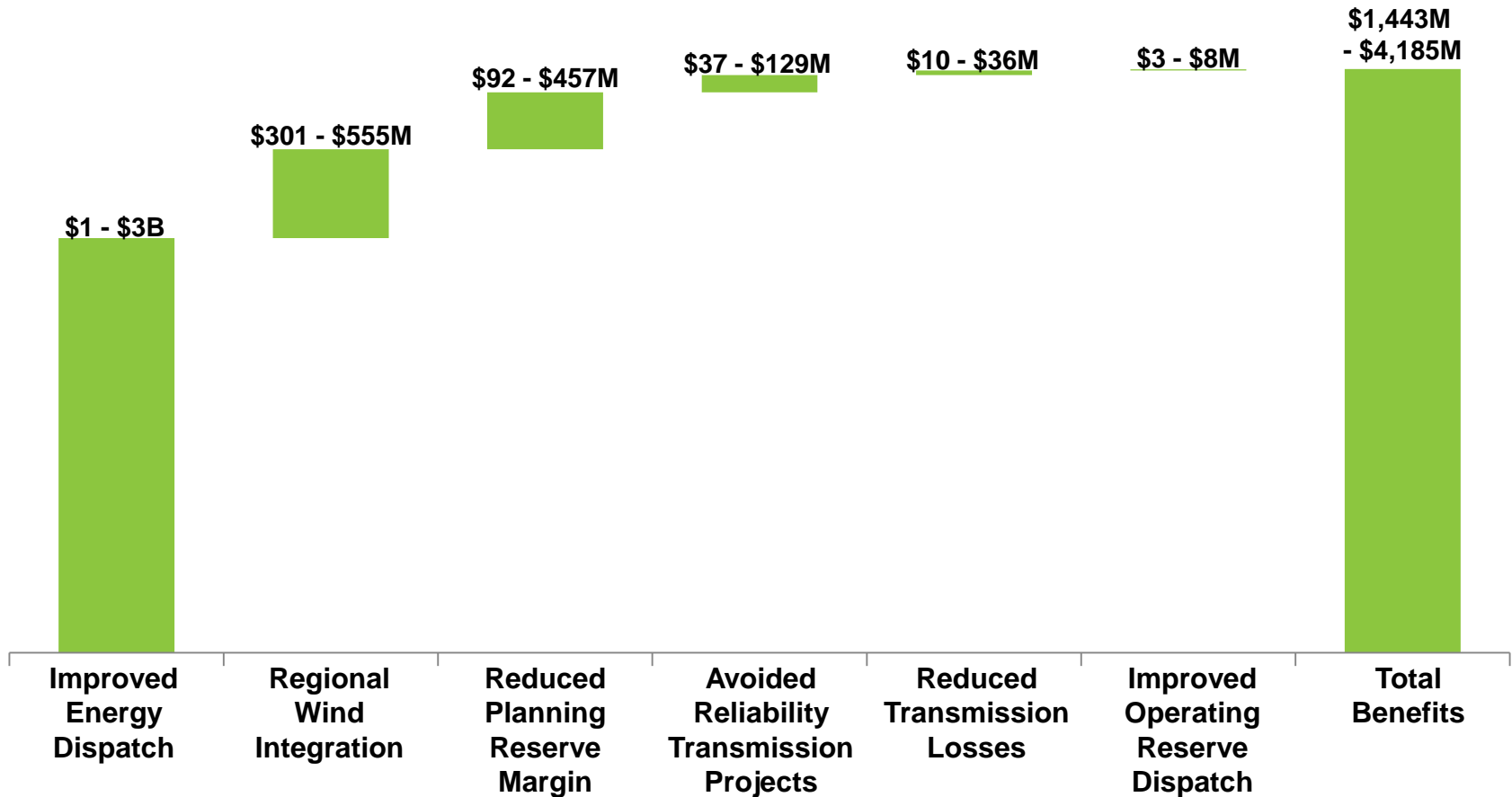
# Proposed transmission expansion projects will greatly reduce system congestion allowing low cost resources to reach load



- Provides benefit / cost ratios of 1.8 to 3.0
- Resolves 650 elemental reliability issues
- Enables 41 million MWh of wind energy
- Provides annual value of \$1.3 B vs. cost of \$0.6 B
- Supports energy zones for both wind and natural gas



# Multi-Value Projects - Benefits to Illinois



## Projects will also create thousands of jobs for Illinois

- 2,300 – 5,500 direct (construction) jobs
- 3,900 – 10,200 total jobs including construction, supplier and other downstream opportunities

# Resource Deliverability Helps Compliance with EPA Rules

**Resource deliverability provides alternatives to policy makers to manage potential cost increases and reliability issues resulting from the implementation of EPA regulations**

Benefits:

- Maintains reliability. When retirements occur, all available compliant resources can be used to maintain reliability UNLESS barriers at the seam prevent that. If the barriers are not removed, this could threaten reliability.
- Increases price transparency. This is especially useful for state regulators during Integrated Resource Planning efforts thereby helping them make prudent investment decisions.
- Provides short-term options for states while they are planning for longer term solutions (today - it is EPA; tomorrow - it will be something else). Every build decision is a 40-year decision.
- Maintains state control over the IRP process - a FERC ruling on this matter will NOT impede state IRP processes

Interregional coordination is necessary to ensure ratepayers are not exposed to higher, inefficient investment decisions, especially given the 3-year EPA cliff and the resulting large investments required looming capacity retirements do not push our industry into crisis.



# Conclusion

- Environmental regulations are going to have a significant impact on the MISO region and its consumers
  - Reduced reserve margin levels
  - Significant (\$33 B) capital investment
  - Increased energy costs (\$5 per MWh) and volatility
- Compliance will require coordinated efforts
  - Simultaneous outages of 61 GW of resources
  - Multi-Value Projects will reduce the price and reliability impacts
  - Resource deliverability can help ease the transition into EPA compliance
  - To take advantage of resource deliverability, federal regulators should direct regional transmission organizations to eliminate artificial interregional barriers to all resources